

FORM PTO-1449
(Modified)U.S. DEPARTMENT OF COMMERCE
PATENT AND TRADEMARK OFFICEATTY. DOCKET NO.
06487 USA

SERIAL NO.

10-809773

INFORMATION DISCLOSURE
STATEMENT BY APPLICANT
(Use several sheets if necessary)APPLICANT
Zurecki, et al.

FILING DATE

GROUP

(37 CFR 1.98(b))

U.S. PATENT DOCUMENTS

EXAM- NER INITIAL	DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPRO- PRIATE
22	3 6 9 6 6 2 7	10/10/72	Ralph C. Longworth	62	51	1/18/71
22	4 2 9 6 6 1 0	10/27/81	Robert B. Davis	62	55	4/17/80
22	4 3 3 6 6 8 9	6/29/82	Robert B. Davis	62	55	7/10/81
22	4 7 1 5 1 8 7	12/29/87	Thornton Stearns	62	55	9/29/86
22	5 4 7 7 6 9 1	12/26/95	Norman H. White	62	50	9/30/94
22	2 6 3 5 3 9 9	4/21/53	W.H. West, Jr.	51	266	4/19/51
22	5 1 0 3 7 0 1	4/14/92	Lundin, et al	82	173	4/1/91
22	5 5 0 9 3 3 5	4/23/96	Edwin L. Emerson	82	1.11	2/25/94
22	5 5 9 2 8 6 3	1/14/97	Jaskowiak, et al	82	1.11	9/25/95
22	5 7 6 1 9 7 4	6/9/98	Wang, et al	82	1.11	7/22/96
22	5 9 0 1 6 2 3	5/11/99	Shane Y. Hong	82	50	9/24/96
22	3 4 3 3 0 2 8	3/18/69	David J. Klee	62	45	9/2/66
22	6 1 7 9 6 9 2	1/30/01	Mitsugu Hara	451	53	1/5/99
22	5 2 6 5 5 0 5	11/30/93	Eugene L. Frechette	82	159	10/29/92
22	5 8 6 2 8 3 3	1/26/99	Frederick W. Perez	137	625.11	5/28/97
22	6 1 4 5 3 2 2	11/14/00	Yutaka Odashima	62	50.7	5/28/99
22	5 7 6 2 3 8 1	6/9/98	Vogel, et al	285	330	12/8/95
22	3 9 7 1 1 1 4	7/27/76	George M. Dudley	29	106	1/27/72
22	6 2 0 0 1 9 8	3/13/01	Ukai, et al	451	53	10/15/98
22	4 8 2 9 8 5 9	5/16/89	Gerald K. Yankoff	82	1.11	8/29/86
22	5 7 3 8 2 8 1	4/14/98	Zurecki, et al	239	290	5/8/97
22	5 3 9 2 6 0 8	2/28/95	Ron C. Lee	62	9	3/26/93
22	5 1 2 3 2 5 0	6/23/92	Radovan R. Maric	62	49.2	9/27/91
22	4 7 1 6 7 3 8	1/5/88	Tatge, et al	62	55	8/4/86
22	4 5 1 0 7 6 0	4/16/85	Rolf H. Wieland	62	49	3/2/84
22	5 8 7 8 4 9 6	3/9/99	Liu, et al.	29	898.066	4/9/96
22	2003 0 1 4 5 6 9 4	8/7/03	Zurecki, et al. (Publication)	82	1.11	2/4/02
22	2003 0 1 1 0 7 8 1	6/19/03	Zurecki, et al. (Publication)	62	64	9/13/01
22	6 6 6 6 0 6 1	12/23/03	Heimann	72	110	05/28/02
22	6 6 5 8 9 0 7	12/9/03	Inoue, et al.	72	53	
22	2002 0 1 7 4 5 2 8	11/28/02	Prevey, III (Publication)	29	90.01	05/21/02
22	6 6 2 2 5 7 0	09/23/03	Prevey, III	73	826	03/01/00
22	6 4 5 4 8 7 7	09/24/02	Kumar, et al.	148	222	

FOREIGN PATENT DOCUMENTS

	DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION	
						YES	NO
22	6 2 1 0 1 0 5	8/2/94	Japan	B01D	19/00		X
22	9 7 0 8 4 8 6	3/6/97	WO	F16L	39/00	x	
22	9 9 6 0 0 7 9	11/25/99	WO	C10M	A2	X	
22	03 0 6 6 9 1 6	1/21/03	WO (Publication)	C22C	A2	X	
22	03 0 2 2 5 1 7	8/29/02	WO (Publication)	B23Q	11/00	X	
22	02 0 9 6 5 9 8	5/23/02	WO (Publication)	B23Q	11/10	X	

OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

22	Biomedical Instrumentation and Tech., "Development of a High-Performance Multiprobe Cryosurgical Device", Chang, et al, 1994.
22	"Heat Transfer in Cutting Inserts", Kabala Andrzej, Experimental Stress Analysis 2001.
22	"Applications of Ceramic Cutting Tools", Key Engineering Materials, Vol. 138-140 (1998).
22	"The Use of High Speed Machining for the Manufacture of Hardened Steel Dies", Trans. NAMRI/SME, 1996.
22	T.J. Broskea et al., MMS Online (www.mmsonline.com/articles)

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OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

	22	E.M. Trent and P.K. Wright, "Metal Cutting", 4 th Ed., Butterworth, Boston, Oxford, 2000.
	22	ASM Handbook, 9 th Ed., Vol. 16, "Machining Ceramic Materials," 1995.
	20	Zurecki and Harriott, "Industrial Systems for Cost Effective Machining of Metals Using an Environmentally Friendly Liquid Nitrogen Coolant", Aerospace Mfg. Tech. Conf. 1998. Paper No. 981,865.
	20	Zurecki et al., "Dry Machining of Metals With Liquid Nitrogen", the 3 rd Intl. Machining & Grinding '99.
	20	J. Lin et al., "Estimation of Cutting Temperature in High Speed Machining", Trans. of the ASME, Vol. 114.
	20	S545-type milling cutter made by Niagara Cutter(http://www.niagaracutter.com/techinfo).
	20	"Machining Data Handbook," 3 rd Edition, Vol. 1 and 2, Machinability DataCenter, IAMS, Inc. 1980.
	20	"Application of Metal Cutting Theory," F.E. Gorczyca, Industrial Press, New York, 1987.
	20	"Analysis of Material Removal Processes," W.R. DeVries, Springer Texts in Mechanical Eng., Springer-Verlag, 1992.
	20	"Ceramics and Glasses, Engineered Materials Handbook," Vol. 4, ASM Int., The Matls Information Soc., '91.
20	20	ASM Specialty Handbook, "Tool Materials," Ed. J.R. Davis, 1998.
	20	"Microstructural Effects in Precision Hard Turning," Y.K. Chou; C.J. Evans, MED-Vol. 4, Mfg. Sci. and Engr., ASME 1996.
	20	"Temperature and wear of cutting in high-speed machining of Inconel 710 and Ti6Al-6V-2Sn," T. Kitagawa, et al., Wear 202 (1997), Elsevier, pp. 142-148.
	20	"The Leidenfrost phenomenon", F.L. Curzon, Am. J. Phys., 46 (8), Aug. 1978, pp. 825-828.
	20	"A boiling heat transfer paradox", G.G. Lavallo et al., Am. J. Phys., vol. 60, No. 7, July 1992, pp.593-597.
	20	"Cooling by immersion in liquid nitrogen", T.W. Listerman et al., Am. J. Phys., 54 (6), June '86, pp. 554-558.
	20	"An Analytical Method to Determine the Liquid Film Thickness Produced by Gas Atomized Sprays", J. Yang et al., J. of Heat Transfer, Feb. 1996, Vol. 118, pp. 255-258.
	20	"Optimizing and Predicting Critical Heat Flux in Spray Cooling of a Square Surface", I. Mudawar and K.A. Estes, J. of Heat Transfer, Aug. 1996, vol. 118, pp. 672-679.
	20	"Film Boiling Under an Impinging Cryogenic Jet", R.F. Barron and R.S. Stanley, Advances in Cryogenic Engineering, Vol. 39, Ed. P. Kittel, Plenum Press, New York, 1994, pp. 1769-1777.
	20	"CRC Materials Sci. & Engineering Handbook," 2 nd Edition, CRC Press, 1994, Edited by J.F. Shackelford et al.
	20	"Transport Phenomena," R.R. Bird et al., John Wiley & Sons, 1960.
	20	"Numerical and Experimental Simulation for Cutting Temperature Estimation using 3-dimensional Inverse Heat Conduction Technique," F.R.S. Lima, et al.
	20	"White Layer Formation at Machined Surfaces and ...," B.J. Griffins, J. of Tribology, Vol. 107/165, 4/1985.
	20	"Machining Hard Materials with Geometrically ...," W. Konig, et al, Annals of CIRP, Vol. 57, 1990.
	20	"Potential and Limitations of Hard Turning...", H.K. Tonshoff, et al, 1 st Int. Machining and Grinding Conf. 1995.
	20	"PCBN Tool Failure Mode Analysis," T.J. Broskeá, Intertech 2000.
	20	"Process Effects on White Layer Formation in Hard Turning," Y.K. Chou, et al, NAMRI/SME, 1998.
	20	"Ceramics and Glasses, Engineered Mat. Handbook", Vol. 4 ASM Int., The Mat. Info. Soc., 1991.
	20	"Microstructural Effects in Precision Hard Turning", Chou, et al, MED-Vol. 4 ASME 1996.
	20	"Temperature and wear of cutting tools in high-speed machining..." Kitagawa, et al, Wear 202 1997.
	20	"Applications of Ceramic Cutting Tools," Mehrotra, Key Engr. Mat., Vol. 138-140, 1998.
	20	"Cutting Tools," Edwards, The Institute of Mat., 1993.
	20	"Performance of Ceramic Cutting Tools in Turning Operations," D'errico, et al, Ind. Ceraminc, Vol. 17, 1997.
	20	"Tool Materials," ASM Specialty Handbook, 1995, p. 73.
	20	"The Use of High Speed Machining for the Manufacture of Hardened...", Dewes, et al, NAMRI/SME Vol. 14.
	20	"Metal Cutting," Trent, et al, 4 th Edition, Butterworth Heinemann, Boston, Oxford, 2000.
	20	"Machining," Metals Handbook 9 th Edition, Vol. 16, 1996.
	20	Thiele, et al., "Effect of Cutting Edge Geometry and Workpiece Hardness on Surface Generation in the finish Hard Turning of AISI 52100 Steel", Journal of Materials Processing Technology, 94 (1999), pp. 216-226

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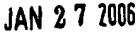
OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

		25	Ozel, et al., "Effects of Cutting Edge Geometry, Workpiece Hardness, Feed Rate and Cutting Speed on Surface Roughness and Forces in Finish Turning of Hardened AISI H13 Steel", Department of Industrial and Systems Engineering, Rutgers, The State University of New Jersey, Piscataway, New Jersey 08854 USA, pp. 1-33
		25	J. Y. Huang, et al., "Microstructure of Cryogenic Treated M2 Tool Steel," Materials Science and Engineering A339 (2003) 241-244
		25	Chang-Xue (Jack) Feng, "An Experimental Study of the Impact of Turning Parameters on Surface Roughness", Paper No. 2036, Proceedings of the 2001 Industrial Engineering Research Conference, pp. 1-9
			F. Gunnberg, "Surface Integrity Generated by Hard Turning," Thesis, Dept. of Product Development, Chalmers University of Technology, Goteborg, Sweden, 2003

EXAMINER	<i>Will C DeL</i>	DATE CONSIDERED	8-5-06
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EXAMINER: Initial citation considered. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

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Substitute for form 1449/PTO

(Use as many sheets as necessary)

Application Number	10/809,773
Filing Date	03/25/2004
First Named Inventor	Zbigniew Zurecki, et al.
Art Unit	3722
Examiner Name	Sara Addisu
Attorney Docket Number	06487 USA

Sheet	1	of	1
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FOREIGN PATENT DOCUMENTS						
Examiner Initials*	Cite No. ¹	Foreign Patent Document	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T ⁶
		Country Code ³ Number ⁴ Kind Code ⁵ ^a <small>(known)</small>				
22		WO 99/60079	11/25/1999	The Trustees of Columbia University in the City of New York		
22		WO 02/096598	12/05/2002	Air Products and Chemicals, Inc.		

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office.

